

ABSTRACT

An ultrasonic load measurement transducer (14) is mated with a thread-forming fastener (12) to provide a load indicating thread-forming fastener (10) that can be used for precise and reliable assembly of critical bolted joints, such as those in the automobile and aerospace industries, among others. Steps can then be taken to accurately measure and control the load in the thread-forming fastener (10) during tightening, and to inspect the load in the thread-forming fastener (10) after assembly. A similar result can be achieved for a thread-locking fastener by mating an ultrasonic transducer with the thread-locking fastener assembly.